

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method of manufacturing an encapsulated
2 calorimetric flow meter comprising the following steps:
3 providing an integrated circuit assembly incorporating a fluid flow channel, at
4 least two temperature sensing elements operative to measure the temperature in different regions
5 of the channel and a heating element located in between the temperature sensing elements to heat
6 a region of the channel;
7 applying a quantity of gel to the integrated circuit ~~such as to~~ cover at least each
8 end of the channel, thereby forming a gel-covered assembly;
9 inserting the gel-covered assembly into a cavity of a moulding tool ensuring that
10 at least a portion of the gel is in contact with a surface of the cavity;
11 introducing a plastic mould compound into the cavity so as to encapsulate the gel-
12 covered assembly except for the portion where the gel is in contact with the cavity surface; and
13 removing the gel-covered assembly from the cavity, whereby ~~there is an opening~~
14 ~~defined in the plastic mould encapsulating the gel-covered assembly at each end of the channel;~~
15 ~~thus allowing fluid to flow through the channel~~ the plastic mould compound forms a case which
16 encompasses the gel-covered assembly, wherein there are openings defined in the case at each
17 end of the channel thus allowing fluid to flow through the channel.
- 1 2. (Currently amended) A method as claimed in claim 1 wherein the
2 channel is also filled with the gel before the integrated circuit assembly is encapsulated.
- 1 3. (Currently amended) A method as claimed in claim 1 wherein the
2 integrated circuit assembly is mounted on a lead frame.

1 4. (Currently amended) A method as claimed in claim 3[[2]] wherein the
2 lead frame has holes which coincide with the end of the channel when the integrated circuit
3 assembly is mounted on the lead frame and the gel is applied so as to cover the holes in the lead
4 frame.

1 5. (Currently amended) A method as claimed in claim 4 wherein a wall of
2 the channel is formed by a portion of the lead frame and wherein there are slots provided in the
3 lead frame alongside that portion of the lead frame forming a wall of the passagewaychannel.

1 6. (Currently amended) A method as claimed in claim 5 wherein the slots do
2 not extend past the holes in the lead frame at either end of the passagewaychannel.

1 7. (Previously presented) A method as claimed in claim 1 wherein the
2 channel is formed by etching.

1 8. (Currently amended) A method as claimed in claim 1 wherein the
2 channel is provided upon a reverse face of the integrated circuit assembly and the temperature
3 sensing elements and ~~heat sensing~~the heating element are provided upon a front face of the
4 integrated circuit assembly.

1 9. (Currently amended) A method as claimed in claim 1 wherein the
2 integrated circuit assembly is a CMOS integrated circuit.

1 10. (Currently amended) A method as claimed in claim 1 wherein means are
2 provided to allow direct or wireless communication between the integrated circuit assembly and
3 external circuitry.

1 11. (Currently amended) A method as claimed in claim 1 wherein the
2 integrated circuit assembly additionally incorporates processing means to calculate a mass flow
3 from the temperature difference detected by the temperature sensing elements.

1 12. (Currently amended) A method as claimed in claim 1 wherein additional
2 circuit elements are incorporated into the integrated circuit assembly, said additional circuit
3 elements including one or more elements selected from a group consisting of: means operative to
4 interface between the heating and sensing elements~~means~~ and external electronic control means;
5 means operative to receive and store calibration data for the temperature sensing elements~~means~~;
6 means operative to convert analogue signals to digital signals; ~~include~~ means operative to carry
7 out calculations on the digital signals to facilitate improved or additional performance or to
8 improve accuracy or to compensate the measurements for external or internal change; and means
9 provided at a[[the]] fluid inlet and a[[the]] fluid outlet such that the errors due to the inlet and
10 outlet temperatures not being equal can be corrected by calculation.